



2019 Regional SO₂ Emissions and Milestone Report

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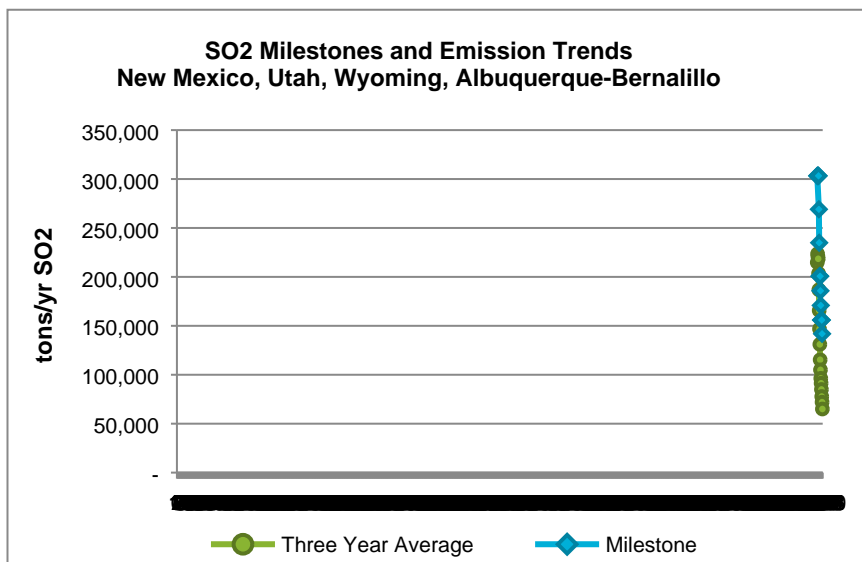
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2019 Regional SO₂ Emissions and Milestone Report

Executive Summary

Under Section 309 of the Federal Regional Haze Rule, nine western states, and tribes within those states, have the option of submitting plans to reduce regional haze emissions that impair visibility at 16 Class I areas on the Colorado Plateau. Five states – Arizona, New Mexico, Oregon, Utah, and Wyoming – and Albuquerque-Bernalillo County initially exercised this option by submitting plans to the Environmental Protection Agency (EPA) by December 31, 2003. Oregon elected to cease participation in the program in 2006 and Arizona elected to cease participation in 2010. The tribes were not subject to the deadline and still can opt into the program at any time. Under the Section 309 plans, the three participating states and Albuquerque-Bernalillo County have tracked the emissions of the applicable stationary sources as part of the pre-trigger portion of the SO₂ Milestone and Backstop Trading Program. The Western Regional Air Partnership (WRAP) is assisting these states and county with the implementation and management of the regional emission reduction program. As used in this document, “Section 309 states” means the states of New Mexico, Utah, and Wyoming and Albuquerque-Bernalillo County. (For CAA purposes, this report treats Albuquerque-Bernalillo County as a state because it has authority under federal and state law to administer the CAA separately from the rest of New Mexico).

As part of this program, the Section 309 states must submit an annual Regional Sulfur Dioxide (SO₂) Emissions and Milestone Report that compares emissions to milestones. A milestone is a maximum level of annual emissions for a given year. The states submitted the first report in 2004 for the calendar year 2003. Over the course of the program, the states have consistently stayed below the milestones.



From 2003 to 2017 states compared the milestone to a three-year average of SO₂ emissions as required by their State Implementation Plans (SIP). The states' SIPs require them to compare the final 2018 regional milestone to 2018 emissions rather than the three-year average. The regional milestone for 2018 is 141,849 tons. Section 309 of the Regional Haze Rule requires that states continue showing compliance with the final 2018 milestone beyond the first Regional Haze implementation period. In this document the states report the 2019 adjusted emissions as

required by Section 309 of the CAA. We compared the adjusted 2019 emissions to the final 2018 milestone to determine whether the states met the milestone. The adjustments to reported emissions were required to allow the basis of current emission estimates to be comparable to the emissions monitoring or calculation method used in the most recent base year inventory.

As presented in Table ES-1, the Section 309 states reported 55,665 tons of SO₂ emissions for the calendar year 2019. The total emissions increased to 65,001 tons of SO₂ after adjusting to account for changes in monitoring, calculation methods, and enforcement actions. The adjustments result in an additional 9,334 tons of SO₂ emissions.

Based on this adjusted annual emissions estimate, the Section 309 states determined that emissions in 2019 were below the regional SO₂ milestone for 2018. The states' Section 309 plans contain provisions to adjust the milestones to account for enforcement actions (to reduce the milestones where an enforcement action identified that emissions in the baseline period were greater than allowable emissions). Based on emissions data received from the states and plan requirements regarding adjustments to the milestones, no enforcement action adjustment is required.

The plans also require that the annual report identify, first, changes in the total number of sources from year to year and, second, significant changes in a source's emissions from year to year. The significant emission changes from 2018 to 2019 are included in Section 6 of this report. A list of facilities added to, or removed from, the list of subject sources in the original base year inventories is included in Appendix B.

Table ES-1

Overview of 2019 Regional Milestones and Emissions for Section 309 Participating States

<u>2018 Sulfur Dioxide Milestones</u>	
Regional 2018 Milestone*	141,849 tons
Adjusted 2018 Milestone	141,849 tons
<u>2019 Sulfur Dioxide Emissions</u>	
Reported 2019 Emissions	55,665 tons
Adjustments**	
Emission Monitoring, Calculation Methods, and Enforcement Actions	9,334 tons
Adjusted 2019 Emissions (rounded number)	65,001 tons
<u>Comparison of Emissions to Milestone</u>	
2019 Adjusted Emissions	65,001 tons
Adjusted Three-State 2018 Milestone	141,849 tons
Difference (Negative Value = Emissions < Milestone)	-76,847 tons
2019 Emissions as Percent of 2018 Milestone	46%

* See the Regional Milestones section of each state's 309 plan.

** See the Annual Emissions Report section of each state's 309 plan.

2019 Regional SO₂ Emissions and Milestone Report

1.0 Introduction

1.1 Background

Under Section 309 of the Federal Regional Haze Rule (40 CFR Part 51), nine western states, and the tribes within those states, have the option of submitting State Implementation Plans (SIPs) to reduce regional haze emissions that impair visibility at 16 Class I areas on the Colorado Plateau. Five states — Arizona, New Mexico, Oregon, Utah, and Wyoming — and Albuquerque-Bernalillo County exercised this option by submitting SIPs to the EPA by December 1, 2003. In October 2006, when EPA modified Section 309, Oregon elected to cease participation in the SO₂ Milestone and Backstop Trading Program by not resubmitting a Section 309 SIP. In 2010, Arizona elected to cease participation in the program. The tribes were not subject to this deadline and still can opt into the program at any time.

Under the Section 309 SIPs, these three states and one local air agency have been tracking emissions under the pre-trigger requirements of the SO₂ Milestone and Backstop Trading Program since 2003. The Western Regional Air Partnership (WRAP) is assisting these states with the implementation and management of this regional emission reduction program.

Under the milestone phase of the program, Section 309 states have established annual SO₂ emissions targets (from 2003 to 2018). These voluntary emissions reduction targets represent reasonable progress in reducing emissions that contribute to regional haze. If the participating sources fail to meet the milestones through this voluntary program, then the states will trigger the backstop trading program and implement a regulatory emissions cap for the states, allocate emissions allowances (or credits) to the affected sources based on the emissions cap, and require the sources to hold sufficient allowances to cover their emissions each year.

This report is the seventeenth annual report for the milestone phase of this program. The report provides background on regional haze and the Section 309 program, the milestones established under the program, and the emissions reported for 2019. Based on the first sixteen years, the voluntary milestone phase of the program is meeting its reasonable progress targets, and emissions are well below the target levels.

What is Regional Haze?

Regional haze is air pollution that is transported long distances and reduces visibility in national parks and wilderness areas across the country. Over the years, this haze has reduced the visual range from 145 kilometers (90 miles) to 24 – 50 kilometers (15 – 31 miles) in the East, and from 225 kilometers (140 miles) to 56 – 145 kilometers (35 – 90 miles) in the West. The pollutants that create this haze are sulfates, nitrates, organic carbon, elemental carbon, and soil dust. Human-caused haze sources include industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices.

What U.S. EPA Requirements Apply?

In 1999, the EPA issued regulations to address regional haze in 156 national parks and wilderness areas across the country. EPA published these regulations in the Federal Register on

July 1, 1999 (64 FR 35714). The goal of the Regional Haze Rule (RHR) is to eliminate human-caused visibility impairment in national parks and wilderness areas across the country. It contains strategies to improve visibility over the next six decades, and requires states to adopt implementation plans.

The EPA's RHR provides two paths to address regional haze. One is 40 CFR 51.308 (Section 308), and requires most states to develop long-term strategies out to the year 2064. States must show that these strategies make "reasonable progress" in improving visibility in Class I areas inside the state and in neighboring jurisdictions. The other is 40 CFR 51.309 (Section 309), and is an option for nine states — Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming — and the 211 tribes located within these states to adopt regional haze strategies for the period from 2003 to 2018. These strategies are based on recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) for protecting the 16 Class I areas on the Colorado Plateau. Adopting these strategies constitutes reasonable progress until 2018. These nine western states and tribes can also use the same strategies to protect the other Class I areas within their own jurisdictions.

The EPA revised the RHR on July 6, 2005 (70 FR 39104), and again on October 13, 2006 (71 FR 60612) in response to two legal challenges. The October 13, 2006 revisions modified Section 309 to provide a methodology consistent with the Court's decision for evaluating the equivalence of alternatives to Best Available Retrofit Technology (BART), such as the alternative Section 309 strategy based on the GCVTC recommendations.

How Have the WRAP States Responded to EPA Requirements?

Of the nine states, and tribes within those states, that have the option under Section 309 of participating in a regional strategy to reduce SO₂ emissions, five states originally submitted Section 309 SIPs to EPA. These states were Arizona, New Mexico, Oregon, Utah, and Wyoming. In addition, Albuquerque-Bernalillo County also submitted a Section 309 SIP. Due to legal challenges, EPA did not approve the initial SIP submittals. EPA did, however, fully approve the regional milestone and backstop trading program in 2012.

Oregon and Arizona have opted out of submitting a revised Section 309 SIP under the modified RHR, which leaves three participating states and Albuquerque-Bernalillo County. To date, no tribes have opted to participate under Section 309, and the other four states of the original nine opted to submit SIPs under Section 308 of the RHR.

The following summarizes SO₂ related elements of the Section 309 process for the participating Section 309 states:

1. Section 309(d)(4)(i) requires SO₂ milestones in the SIP and includes provisions for adjusting these milestones, if necessary. The milestones must provide for steady and continuing emission reductions through 2018 and greater reasonable progress than BART.
2. Section 309(d)(4)(iii) requires monitoring and reporting of stationary source SO₂ emissions in order to ensure the SO₂ milestones are met. The SIP must commit to reporting to the WRAP as well as to EPA.

3. Section 309(d)(4)(iv) requires that a SIP contain criteria and procedures for activating the trading program within five years if an annual milestone is exceeded. A Section 309 SIP must also provide for assessments of the state's progress in 2013 and 2018.
4. Section 309(d)(4)(vi)(A) requires that unless and until a revised implementation plan is submitted in accordance with § 51.308(f) and approved by EPA, the implementation plan shall prohibit emissions from covered stationary sources in any year beginning in 2018 that exceed the year 2018 milestone.

This report responds to Item 2, above, and provides the annual report that compares the 2018 emissions against the milestones for the states and city that have submitted Section 309 SIPs to EPA.

What Elements Must the Regional SO₂ Emissions and Milestone Report Contain?

To facilitate compliance with the Section 309 SIPs, the WRAP has committed to compiling a regional report on emissions for each year. In accordance with the SIPs, the WRAP will compile the individual state emission reports into a summary report that includes:

1. Reported regional SO₂ emissions (tons/year).
2. Adjustments to account for:
 - Changes in emissions monitoring or calculation methods; or
 - Enforcement actions or settlement agreements as a result of enforcement actions.
3. As applicable, average adjusted emissions for the last three years (which are compared to the regional milestone). Per requirements in the Section 309 SIPs, it is understood that a single year of emissions are used in the report beginning in 2018.

How Is Compliance with the SO₂ Milestone Determined?

While the WRAP assists with the preparation of this report, each Section 309 state reviews the information in the report and proposes a draft determination that the regional SO₂ milestone is either met or exceeded for that year. Each state submits the draft determination for public review and comment, in accordance with its SIP, during the first part of 2021, culminating in a final report sent to EPA by March 31, 2021.

1.2 Report Organization

This report presents the regional SO₂ emissions and milestone information required by the 309 SIPs for the Section 309 states. The report is divided into the following sections, including two appendices:

- Reported SO₂ Emissions in 2019;
- Emissions Adjustments Related to Monitoring Methodology or Enforcement Actions;
- 2019 Adjusted Emissions;
- Enforcement Milestone Adjustments;
- Quality Assurance (Including Source Change Information);
- Milestone Determination;
- Appendix A -- Facility Emissions and Emissions Adjustments; and
- Appendix B -- Changes to SO₂ Emissions and Milestone Source Inventory.

2.0 Reported SO₂ Emissions in 2019

The Section 309 SIPs require all stationary sources with reported emissions of 100 tons or more per year in the year 2000, or any subsequent year, to report annual SO₂ emissions. Table 1 summarizes the annual reported emissions from applicable sources in each state. The 2019 reported SO₂ emissions for each applicable source are in Appendix A, Table A-1.

Table 1. Reported 2019 SO₂ Emissions by State

State	Reported 2019 SO ₂ Emissions (tons/year)
Albuquerque-Bernalillo	118
New Mexico	6,409
Utah	9,330
Wyoming	39,809
TOTAL	55,665

In the 2018 Milestone Report, three sources from New Mexico and Wyoming were reported incorrectly. Below is a table listing these sources and corrected emissions.

Table 2. Corrected 2016 emissions

State	Source	Incorrect Emissions reported 2018 (SO ₂ tons)	Correct Emissions for 2018 (SO ₂ tons)
NM	VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	76.3	535
NM	Versado Gas Processors, LLC / Monument Plant [Old name(s): TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	406	309
WY	TATA Chemicals (Soda Ash Partners) - Green River Plant (formerly General Chemical)	3,917	2,217

The corrections resulted in over reporting 2018 emissions by 1,338 tons. It does not cause an exceedance of the 2018 milestone. Emissions from these three plants are correct in the tables and calculations in this report.

3.0 Emissions Adjustments Related to Monitoring Methodology or Enforcement Actions

The annual emissions reports for each state include proposed emissions adjustments to ensure consistent comparison of emissions to the milestone. Each state adjusted the reported emissions levels so that they are comparable to the levels that would result if the state used the same emissions monitoring or calculation method used in the base year inventory (2006). The net impact throughout the region, because of adjustments related to the monitoring methodology, is an increase of 1,329 tons from the reported 2019 emissions.

Utah adjusted the emissions from the Carbon Power Plant due to an enforcement action. As part of Utah's BART alternative for NO_x, they required that the Carbon Power Plant shut down. Though there is an actual emissions reduction of 8,005 tons of SO₂ per year, the Utah Air Quality Board approved a Commitment SIP stating that the emissions reductions from the closure will not be counted for both the SO₂ Milestone program and the BART alternative controls. Therefore, an additional 8,005 tons of SO₂ are included in the calculations for this milestone report. Table 3 summarizes the emissions adjustments made for changes in monitoring methodology or enforcement actions.

Table 3. Adjustments for Changes in Monitoring Methodology or Enforcement Actions

State	Source	Reported 2019 SO ₂ Emissions (tons)	Adjusted 2019 SO ₂ Emissions (tons)	Monitoring Methodology Adjustment (tons)	Enforcement Action Adjustment (tons)	Description
UT	Chevron Products Co. -- Salt Lake Refinery	57	907	850	--	Increase in Adjusted SO ₂ Emissions is due to a correction in the calculation of Adjusted SO ₂ Emissions. The previous formula used to calculate SO ₂ included flowmeters and engineering judgement etc. The current formula for calculating now incorporates CEM data.
UT	Big West Oil Company - Flying J Refinery	56	230	175	--	Now using CEM data
UT	Holcim-Devil's Slide Plant	147	453	306	--	The new CEM value for the kiln fuel combustion is 36.5 lbs of SO ₂ per hour.
UT	PacifiCorp -- Carbon Power Plant	0	8,005	--	8,005	A Utah Enforceable Commitment SIP resolves that SO ₂ emissions reductions from the closure of the Carbon plant will not be counted as part of achieving the SO ₂ Milestones and as part of the Alternative to BART SIP for NO _x . Therefore, 8,005 tons of SO ₂ are included in the emissions totals.

4.0 2019 Adjusted Emissions

The SIPs require multi-year averaging of emissions from 2004 to 2017 for the milestone comparison. From 2005 to 2017, states compare a three-year average (which includes the reporting year and the two previous years) with the milestone. For this milestone report the SIPs require a comparison of 2019 emissions with the 2018 milestone. The adjusted emissions for 2019 are 65,001. The following report sections describe the adjusted milestone determination.

5.0 Enforcement Milestone Adjustments

The SIPs require that each state report on proposed milestone adjustments due to enforcement actions, which affect baseline year emissions. The purpose of this adjustment is to remove emissions that occurred above the allowable level in the baseline year from the baseline and the annual milestones. The enforcement milestone adjustments require an EPA-approved SIP revision before taking effect. There were no proposed enforcement action related milestone adjustments reported for 2019.

6.0 Quality Assurance

The states provided 2019 emissions data based on their state emissions inventories. States used additional quality assurance (QA) procedures for this report to supplement the normal QA procedures the states follow for their emissions inventories. First, each state submitted a source change report, and second, the states compared their inventory data for utility sources against 40 CFR Part 75 Acid Rain Program monitoring data.

6.1 Source Change Report

The SIPs require that this annual SO₂ emissions and milestone report include a description of source changes or exceptions report to identify the following:

- Any new sources that were not contained in the previous calendar year's emissions report, and an explanation of why the sources are now included in the program.
- Identification of any sources that were included in the previous year's report and are no longer included in the program, and an explanation of why this change has occurred.
- An explanation for emissions variations at any applicable source that exceeds $\pm 20\%$ from the previous year.

Table 4 provides explanations for the emissions variations from applicable sources from 2018 – 2019 that are greater than 20%. Plants with variations greater than 20%, but reported emissions of less than 20 tons in both 2018 and 2019, are not included in Table 4. Information on these plants is provided in Appendix A.

Appendix B provides a list of all sources added or removed from the program inventory in this and previous reporting years.

Table 4. Sources with an Emissions Change of > ±20% from the Previous Year

State	County FIPS	State Facility Identifier	Plant Name	Reported 2018 SO ₂ Emissions (tons)	Reported 2019 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2018 to 2019
NM	15	350150002	Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	77	19	-75%	Aka Energy owned Empire Abo and reported emissions for CY 2018. The current owner is not sure why 2018's emissions were so high, but stated that the T.O. accounts for 71.8 Tons of SO ₂ vs 0.01 Tons SO ₂ in 2019. Conversely, it appears there were no flaring emissions reported for 2018, whereas almost all of the 2019 SO ₂ emissions were attributable to flaring events.
NM	15	350150011	DCP Midstream/Artesia Gas Plant	124	16	-87%	2018 excess emission totaled to 110 tpy of SO ₂ which decrease significantly in 2019 via increase in plant reliability.
NM	25	350250044	DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1,767	1,320	-25%	The decrease for Eunice gas plant is due to decrease in plant gas throughput. Our SRU SO ₂ emission is the biggest part of overall plant total which comes directly from CEMS. Also, the excess emission decreased from 150 tpy to 74 tpy.
NM	25	350250035	DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	114	14	-88%	Upgrades increase in plant reliability and decreased SO ₂ emissions. Linam had a very long period without any excess emission event at the facility in 2019.
NM	25	350250060	VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	535	647	21%	The SO ₂ emissions currently include pieces of erroneous data for 2018 and 2019. Specifically, corrected SO ₂ values for facility upsets and SSM emissions result in an actual increase of 21% from 2018 to 2019. *.
NM	25	350250004	Frontier Field Services/Maljamar Gas Plant	94	162	72%	Flaring account for total flare volumes and mass for 2019 which includes SSM, Malfunction, and Emergency Events
NM	31	350310008	Western Refining Southwest Inc-Gallup Refinery (Old names: Western Refinery/Ciniza Refinery (Gallup) and GIANT REFINING/CINIZA)	52	39	-25%	The FCC (as the largest SO ₂ contributor) experienced multiple planned and unplanned shut downs in 2019. The FCC exhaust SO ₂ concentration were lower in 2019 compared to 2018.
NM	25	350250007	Davis Gas Processing/Denton Plant	740	543	-27%	2019 processed less gas along with a decrease in the concentration of hydrogen sulfide (H ₂ S). The lower processing rates result in lower acid gas rates along with a decrease in the H ₂ S concentration within the acid gas.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2018 SO ₂ Emissions (tons)	Reported 2019 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2018 to 2019
NM	15	350150008	OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name - Marathon Oil/Indian Basin Gas Plant]	28	7	-74%	There were more SO2 emissions in 2018 compared to 2019 due to a Planned Maintenance for compressor overhaul performed on the Acid Gas (AG) Compressor.
NM	15	350150010	Navajo Refining Co/Artesia Refinery	51	76	50%	Emissions from venting startup, shutdown, and maintenance activity gases to Flares for greater periods of flaring in 2019 than 2018.
NM	25	350250008	Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	1,444	587	-59%	2019 the Jal #3 Gas Plant flared acid gas volumes several times due to the SRU going down because of burner flame failure.
NM	25	350250061	Versado Gas Processors, LLC / Monument Plant [Old name(s): TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	309	269	-13%	The SO2 emissions for the subject facility currently include pieces of erroneous data for 2018 and 2019. Specifically, corrected SO2 values for facility upsets and SSM emissions result in an actual decrease of 13% from 2018 to 2019.
NM	45	350450247	CCI San Juan, LLC /San Juan River Gas Plant	425	30	-93%	The plant made equipment and operating changes to reduce acid gas flaring and associated SO2 emissions. In late 2019, the plant also began reducing gas processing operating rates before the plant was completely shut down (with the exception of one boiler that operated several weeks in January of 2020) on December 13, 2019.
NM	25	350250075	ConocoPhillips-Midland Office / MCA Tank Battery No. 2	140	110	-21%	In 2018 the facility flared 209.67 MMSCF of waste gas while in 2019 only 167.69 MMSCF causing the decrease.
NM	25	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	21	37	75%	This increase was due to a number of third-party power outages experienced in 2019 that impacted the process reliability and required flaring. These third-party outages and associated reliability issues were not experienced in 2018.
UT	11	10119	Chevron Products Co. -- Salt Lake Refinery	47	57	21%	Chevron uses CEM values to calculate emissions for their flare and calculated a new value for 2019. The new value is 0.036% total sulfur.
UT	29	10007	Holcim-Devil's Slide Plant	91	147	62%	Holcim uses CEM values to calculate emissions for their kiln fuel combustion and calculated a new value for 2019.
UT	35	10335	Tesoro West Coast -- Salt Lake City Refinery	43	22	-49%	Tesoro uses CEM values to calculate emissions for their FCUU Regen and measured a new stack test value in 2019.

State	County FIPS	State Facility Identifier	Plant Name	Reported 2018 SO ₂ Emissions (tons)	Reported 2019 SO ₂ Emissions (tons)	% Change	Description Change > ±20% 2018 to 2019
WY	11	2	American Colloid Mineral Co -- Colony East & West Plants	99	50	-50%	Reduction due to change in fuel sources
WY	5	281	Black Hills Corporation - Wygen III	361	706	96%	Data Substituted form Acid Rain Program
WY	13	28	Burlington Resources -- Lost Cabin Gas Plant	1,632	707	-57%	Decrease due to deactivated equipment
WY	41	9	Chevron USA -- Carter Creek Gas Plant	145	20	-86%	No Turnaround activities in 2019
WY	37	48	Tronox Alkali Wyoming Corporation -- Green River Sodium Products (Westvaco facility)	2,328	1,640	-30%	Lower Sulfur Coal
WY	23	1	Exxon Mobil Corporation -- Labarge Black Canyon Facility	19	169	792%	Increase in flaring
WY	23	13	Exxon Mobil Corporation -- Shute Creek	474	1233	160%	Increase in flaring
WY	21	1	Holly Frontier Oil & Refining Company -- Cheyenne Refinery	306	173	-43%	Sulfur Incinerator upset events had lower SO2 emissions compared to 2018
WY	29	0010	Marathon Oil Co -- Oregon Basin Wellfield	222	67	-70%	Less Flaring
WY	23	4	Pacificorp -- Naughton Plant	4,143	2,569	-38%	Decrease is due to deactivated equipment
WY	37	22	Simplot Phosphates LLC -- Rock Springs Plant	1,159	759	-34%	Reduced throughput compared to last year
WY	7	1	Sinclair Oil Company -- Sinclair Refinery	148	111	-25%	Less Fuel used
WY	37	5	Solvay Chemicals -- Soda Ash Plant (Green River Facility)	70	52	-25%	Change due to varying effectiveness of wet scrubbers in unit # 19
WY	37	49	Tronox Alkali Wyoming Corporation -- Granger Soda Ash Plant	218	172	-21%	Lower Sulfur Coal Used
WY	1	5	University of Wyoming - Heat Plant	35	28	-20%	Lower Sulfur Coal Used
WY	56043	397	Washakie Midstream Services - Worland Gas Plant (WMS)	30	20	-33%	Less pigging, more downtime

6.2 Part 75 Data

Federal Acid Rain Program emissions monitoring data (required by 40 CFR Part 75) were used to check reported power plant emissions.

Sources in the region subject to Part 75 emitted 70% of the region's reported emissions in 2019. We compared Acid Rain Program power plant emission data from EPA's Data and Maps website to plant totals reported by each state. The SIPs require the use of Part 75 methods for Part 75 sources. The reported emissions matched EPA's emission data with the exception of three sources. The sources whose reported emissions did not match EPA's data are in Table 5.

Table 5. Reported facility emissions that do not match information in the Acid Rain Database

State	Facility Name	Facility ID (ORISPL)	Year	2019 Acid Rain Database Emissions (tons SO ₂)	2019 Reported Emissions (tons SO ₂)
WY	Laramie River	6204	2019	6,132	7,860
WY	Naughton	4162	2019	2,566	2569
WY	Wygen III	56596	2019	271	706

7.0 Milestone Determination

The Section 309 regional 2018 milestone is 141,849 tons SO₂. The 2019 adjusted emissions are 65,001 tons SO₂; therefore, the participating states have met the 141,849 tons SO₂ milestone.

8.0 Public Comments

New Mexico, Albuquerque-Bernalillo, Utah, and Wyoming each published a draft of this report for public review and comment. The draft was also available on the WRAP website. [Add a section about comments received.]

Appendix A

Table A-1
2019 Reported and Adjusted Emissions for Sources Subject to
Section 309 -- Regional Haze Rule

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
ABQ	1	3500100008		GCC Rio Grande Inc. - Portland Cement Manufacturer	3241	327310	118	118	
NM	15	350150024		Agave Energy Co./Agave Dagger Draw Gas Plant	1311	21112	36	36	
NM	15	350150002		Frontier Field Services /Empire Abo Plant [Old name: Arco Permian/Empire Abo Plant; BP America Production]	1321	21113	19	19	
NM	15	350150011		DCP Midstream/Artesia Gas Plant	1321	211112	16	16	
NM	25	350250044		DCP Midstream/Eunice Gas Plant [Old name: GPM GAS EUNICE GAS PLANT]	1321	21113	1,320	1,320	
NM	25	350250035		DCP Midstream/Linam Ranch Gas Plant [Old name: GPM GAS/LINAM RANCH GAS PLANT]	1321	21113	14	14	
NM	15	350150138		Duke -- Magnum/Pan Energy -- Burton Flats	1321	211112	0	0	
NM	15	350150285		Duke Energy/Dagger Draw Gas Plant	1321	211112	0	0	
NM	25	350250060	609	VERSADO GAS PROCESSORS, LP/Eunice Gas Plant [Old name: WARREN PETROLEUM/EUNICE GAS PLANT]	1321	21113	647	647	
NM	25	350250004		Frontier Field Services/Maljamar Gas Plant	1321	21113	162	162	
NM	31	350310008		Western Refining Southwest Inc-Gallup Refinery {Old names:Western Refinery/Ciniza Refinery (Gallup) and GIANT REFINING/CINIZA}	2911	236220	39	39	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
NM	25	350250007		Davis Gas Processing/Denton Plant	1311	21113	543	543	
NM	15	350150008		OXY USA WTP Limited Partnership - Indian Basin Gas Plant [Old Name -Marathon Oil/Indian Basin Gas Plant]	1321	211112	7	7	
NM	15	350150010		Navajo Refining Co/Artesia Refinery	2911	32411	76	76	
NM	45	350450902	2451	Public Service Co of New Mexico/San Juan Generating Station	4911	221112	1,453	1,453	
NM	7	350070001		Raton Pub. Service/Raton Power Plant	4911	221112	0	0	
NM	25	350250008		Regency Field Services/Jal #3 [Old Name Southern Union Gas] /Jal #3	1321	21113	587	588	-1
NM	25	350250051		Versado Gas Processors, LP/Eunice South Gas Plant	1321	211112	0	0	
NM	25	350250061		Versado Gas Processors, LLC / Monument Plant [Old name(s):TARGA MIDSTREAM SERVICES LP, WARREN PETROLEUM/MONUMENT PLANT]	1321	21113	269	269	
NM	25	350250063		Versado Gas Processors, LLC/Saunders Plant [Old name(s): TARGA MIDSTREAM SERVICES, LP, WARREN PETROLEUM/SAUNDERS PLANT]	1321	21113	233	233	
NM	31	350310032	87	Tri-State Gen & Transmission/Escalante Station	4911	221112	810	810	
NM	45	350450247		CCI San Juan, LLC /San Juan River Gas Plant	1321	21113	30	30	
NM	45	350450023		Western Refining Southwest Inc./Bloomfield Products Terminal [Old name: GIANT INDUSTRIES/BLOOMFIELD REF]	2911	42471	0	0	
NM	25	350250075		ConocoPhillips-Midland Office / MCA Tank Battery No. 2	1311	21113	110	110	
NM	25	350250113		ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO2 Plant	1311	21112	37	37	
UT	49	10790		Brigham Young University -- Main Campus	8221	611310	4	4	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
UT	11	10119		Chevron Products Co. -- Salt Lake Refinery	2911	324110	57	907	850
UT	11	10122		Big West Oil Company - Flying J Refinery	2911	324110	56	230	175
UT	27	10313		Graymont Western US Inc. -- Cricket Mountain Plant	1422	212312	31	31	
UT	29	10007		Holcim-Devil's Slide Plant	3241	327310	147	453	306
UT	11	10123		Holly Refining and Marketing Co. -- Phillips Refinery	2911	324110	19	19	
UT	27	10327	6481	Intermountain Power Service Corporation -- Intermountain Generation Station	4911	221112	2,021	2,021	
UT	35	10572		Kennecott Utah Copper Corp. -- Power Plant/Lab/Tailings Impoundment	1021	212234	0	0	
UT	35	10346		Kennecott Utah Copper Corp. -- Smelter & Refinery	3331	331411	703	703	
UT	27	10311		Materion Natural resources - Delta Mill (was Brush Resources)	1099	212299	0	0	
UT	7	10081	3644	PacifiCorp -- Carbon Power Plant	4911	221112	0	8,005	8,005
UT	15	10237	6165	PacifiCorp -- Hunter Power Plant	4911	221112	3,546	3,546	
UT	15	10238	8069	PacifiCorp -- Huntington Power Plant	4911	221112	2,144	2,144	
UT	37	10034		Paradox Midstream, LLC (was CCI Paradox Midstream LLC and Patara Midstream LLC and EnCana Oil & Gas (USA) Incorporated and Tom Brown Incorporated) - Lisbon Natural Gas Processing Plant	2911	211111	0	0	
UT	7	10096		Sunnyside Cogeneration Associates -- Sunnyside Cogeneration Facility	4911	221112	464	464	
UT	35	10335		Tesoro West Coast -- Salt Lake City Refinery	2911	324110	22	22	
UT	43	10676		Utelite Corporation -- Shale processing	3295	212399	115	115	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
WY	11	2		American Colloid Mineral Co -- Colony East & West Plants	1459	212325	50	50	
WY	5	45	56609	Basin Electric -- Dry Fork Station	4911	22112	810	810	
WY	31	1	6204	Basin Electric -- Laramie River Station	4911	221112	7,860	7,860	
WY	3	12		Big Horn Gas Proc -- Big Horn/Byron Gas Plant	1311	22121	0	0	
WY	5	2	4150	Black Hills Corporation - Neil Simpson I	4911	22112	0	0	
WY	5	63	7504	Black Hills Corporation - Neil Simpson II	4911	22112	374	374	
WY	45	5	4151	Black Hills Corporation - Osage Plant	4911	22112	0	0	
WY	5	146	55479	Black Hills Corporation - Wygen 1	4911	22112	443	443	
WY	5	281	56596	Black Hills Corporation - Wygen III	4911	221112	706	706	
WY	13	0009		Burlington Resources -- Bighorn Wells	1300	21111	0	0	
WY	13	28		Burlington Resources -- Lost Cabin Gas Plant	1311	211111	707	707	
WY	41	9		Chevron USA -- Carter Creek Gas Plant	1311	211111	20	20	
WY	37	0177		Chevron USA -- Table Rock Field	1300	21111	0	0	
WY	37	14		Chevron USA -- Table Rock Gas Plant (Formerly Anadarko E&P Co LP)	1321	211111	0	0	
WY	41	0008		Chevron USA -- Whitney Canyon/Carter Creek Wellfield	1300	21111	1	1	
WY	5	225	56319	Cheyenne Light Fuel and Power Company -- Wygen II	4911	22112	225	225	
WY	37	48		Tronox Alkali Wyoming Corporation -- Green River Sodium Products (Westvaco facility)	2812	327999	1,640	1,640	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
WY	13	0007		Devon Energy Production Co., L.P. -- Beaver Creek Gas Field	1300	21111	0	0	
WY	13	8		Devon Gas Services, L.P. -- Beaver Creek Gas Plant	1311	211111	0	0	
WY	23	1		Exxon Mobil Corporation -- Labarge Black Canyon Facility	1300	21111	169	169	
WY	23	13		Exxon Mobil Corporation -- Shute Creek	1311	211111	1,233	1,233	
WY	43	3		Hiland Partners, LLC -- Hiland Gas Plant	1321	48621	0	0	
WY	21	1		Holly Frontier Oil & Refining Company -- Cheyenne Refinery	2911	32411	173	173	
WY	29	7		Marathon Oil Co -- Oregon Basin Gas Plant	1321	211112	248	248	
WY	29	0010		Marathon Oil Co -- Oregon Basin Wellfield	1300	21111	67	67	
WY	37	8		Merit Energy Company - Brady Gas Plant (formerly Anadarko E&P Co LP)	1321	211112	27	27	
WY	29			Merit Energy Company - Shoshone Unit Battery		211112	0	0	
WY	29			Merit Energy Company - Frannie Unit Battery No 1		211112	0	0	
WY	29			Merit Energy Company - Cody Battery		211112	0	0	
WY	29			Merit Energy Company - Frannie 2 Battery		211112	0	0	
WY	41	0002		Merit Energy Company -- Whitney Canyon WellField	1300	21111	0	0	
WY	41	12		Merit Energy Company -- Whitney Facility	1311	211111	2	2	
WY	1	2		Mountain Cement Company -- Laramie Plant	3241	23571	123	123	
WY	37	3		P4 Production, L.L.C. -- Rock Springs Coal Calcining Plant	3312	331111	721	721	

State	County FIPS	State Facility Identifier	ORIS	Plant Name	Plant SIC	Plant NAICS	Reported 2019 SO2 Emissions (tons)	Adjusted 2019 SO2 Emissions (tons)	2019 General New Monitoring Calculation Method Adjustment (tons)
WY	9	1	4158	Pacificorp - Dave Johnston Plant	4911	221112	7,367	7,367	
WY	37	1002	8066	Pacificorp -- Jim Bridger Plant	4911	221112	8,892	8,892	
WY	23	4	4162	Pacificorp -- Naughton Plant	4911	221112	2,569	2,569	
WY	5	46	6101	Pacificorp -- Wyodak Plant	4911	221112	1,752	1,752	
WY	37	22		Simplot Phosphates LLC -- Rock Springs Plant	2874	325312	759	759	
WY	7	1		Sinclair Oil Company -- Sinclair Refinery	2911	32411	111	111	
WY	25	5		Sinclair Wyoming Refining Company -- Casper Refinery	2911	32411	139	139	
WY	37	5		Solvay Chemicals -- Soda Ash Plant (Green River Facility)	1474	325181	52	52	
WY	37	2		TATA Chemicals (Soda Ash Partners) - Green River Plant (formerly General Chemical)	1474	327999	1,876	1,876	
WY	15	1		The Western Sugar Cooperative -- Torrington Plant	2063	311313	1	1	
WY	37	49		Tronox Alkali Wyoming Corporation -- Granger Soda Ash Plant	1474	212391	172	172	
WY	1	5		University of Wyoming - Heat Plant	8221	61131	28	28	
WY	29	12		Vanguard Operating, LLC -- Elk Basin Gas Plant	1311	211111	467	467	
WY	56043	397		Washakie Midstream Services - Worland Gas Plant (WMS)	1321	211112	20	20	
WY	45	1		Wyoming Refining -- Newcastle Refinery	2911	32411	5	5	

Appendix B

Table B-1
Sources Added to the SO₂ Emissions and Milestone Report Inventory

State	County FIP Code	State Facility ID	Facility Name	Report Year of Change
UT	043	10676	Utelite Corporation -- Shale processing	2003
WY	011	0002	American Colloid Mineral Company -- East Colony	2003
WY	011	0003	American Colloid Mineral Company -- West Colony	2003
WY	037	0014	Chevron USA (previously owned by Anadarko E&P Company LP) -- Table Rock Gas Plant	2003
WY	005	0146	Black Hills Corporation -- Wygen 1	2003
WY	041	0002	BP America Production Company -- Whitney Canyon Well Field	2003
WY	013	0009	Burlington Resources -- Bighorn Wells	2003
WY	037	0177	Chevron USA -- Table Rock Field	2003
WY	041	0008	Chevron USA -- Whitney Canyon/Carter Creek Well field	2003
WY	013	0008	Devon Energy Corp. -- Beaver Creek Gas Plant	2003
WY	035	0001	Exxon Mobil Corporation -- Labarge Black Canyon Facility (also identified as Black Canyon Dehy Facility)	2003
WY	013	0007	Devon Energy Corp. -- Beaver Creek Gas Field	2004
WY	005	0225	Cheyenne Light, Fuel and Power (a subsidiary of Black Hills Corporation) -- Wygen II	2008
WY	005	0281	Black Hills Corporation -- Wygen III	2010
WY	005	0045	Basin Electric -- Dry Fork Station	2011
NM	025	350250075	ConocoPhillips-Midland Office / MCA Tank Battery No. 2	2013
NM	025	350250113	ConocoPhillips-Midland Office / East Vacuum Liquid Recovery and CO ₂ Plant	2013
ABQ* NM	001	3500100008	GCC Rio Grande Inc. - Portland Cement Manufacturer	2018

* ABQ NM means Albuquerque-Bernalillo County.

Table B-2
Sources Removed from the SO₂ Emissions and Milestone Report Inventory

State	County FIP Code	State Facility ID	Facility Name	1998 Baseline Emissions (tons/year)	Reason for Change	Report Year of Change
WY	043	0001	Western Sugar Company -- Worland	154	Emissions did not meet 100 TPY program criteria.	2003
WY	017	0006	KCS Mountain Resources -- Golden Eagle	942	Emissions did not meet 100 TPY program criteria.	2003
WY	003	0017	KCS Mountain Resources -- Ainsworth	845	Closed since 2000.	2003
WY	017	0002	Marathon Oil -- Mill Iron	260	Emissions did not meet 100 TPY program criteria.	2003
UT	049	10796	Geneva Steel -- Steel Manufacturing Facility	881	Plant is shut down and disassembled.	2004
WY	023	0001	Astaris Production -- Coking Plant	1,454	Plant is permanently shut down and dismantled.	2004
ABQ* NM	001	00145	Southside Water Reclamation Plant	120	Not subject to program after baseline revisions.**	2008
NM	023	350230003	Phelps Dodge Hidalgo Smelter	16,000	Facility is permanently closed.	2008
NM	017	350170001	Phelps Dodge Hurley Smelter/Concentrator	22,000	Facility is permanently closed.	2008
WY	003	00012	Big Horn Gas Processing -- Bighorn/Byron Gas Plant	605	Facility is permanently closed and dismantled.	2011

* ABQ NM means Albuquerque-Bernalillo County.

** 1998 baseline emissions were based on the facilities' potential to emit (PTE), and not actual emissions. Actual annual emissions have always been below 100 tons. Once the year 2006 baseline became effective, this facility was removed from the inventory.